



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,380	01/16/2001	Bernard Belleau	IAF-1/2 C11	2480

24999 7590 04/23/2003

MILLEN, WHITE, ZELANO & BRANIGAN, PC  
2200 CLARENDON BLVD  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

MCKENZIE, THOMAS C

ART UNIT	PAPER NUMBER
----------	--------------

1624

DATE MAILED: 04/23/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/760,380

Applicant(s)

BELLEAU ET AL.

Examiner

Thomas McKenzie Ph.D.

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 35-75 is/are pending in the application.
- 4a) Of the above claim(s) 51-54 and 73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35,37,39-41,45,47,48,55-63,65-69,74 and 75 is/are rejected.
- 7) ☒ Claim(s) 36,38,42-44,46,49,50,64 and 70-72 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to amendments filed on 2/10/03. Applicant has amended claims 35-38, 45, 46, 55, 56, 63-66, 74, and 75. There are forty-one claims pending and thirty-six under consideration. Claims 35-72, 74, and 75 are synthesis claims. This is the third action on the merits. The application concerns some 1,3,5-triazine compounds and synthesis thereof.

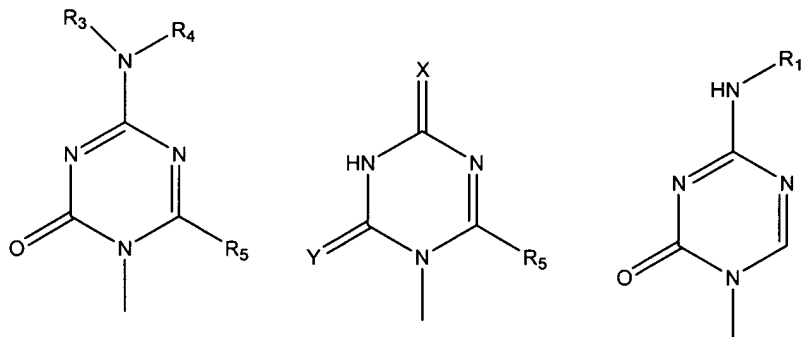
#### ***Response to Amendment***

2. Applicants' amendments concerning the ester label  $R_w$  overcome the claim objection made in point #7 of the previous office action. Applicants' amendment concerning the aromatic acyl group overcomes the rejection made in point #9. Applicants' amendment concerning the ester groups  $R_Y$  and  $R_7$  overcomes the indefiniteness rejections made in point #10, the written description rejection made in point #11. Applicants' amendments drawn to the oxidation state of the side chain overcome the indefiniteness rejection made in point #12 and the written description rejection made in point #13.

#### ***Election/Restrictions***

3. Claims 51-54 and 73 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group of inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 11. .

4. Objection remains made to claims 35-50, 55-72, 74, and 75 as containing non-elected subject matter. The compounds and claimed synthetic methods that make them present a variable core. Claims 35, 36, 45, 46, 55, 56, 63, 64, 74, and 75 contains formulas drawn to the non-elected inventions to the extent they read upon R<sub>2</sub> groups other than the elected 1,3,5-triazine compounds. Examples of the elected groups are drawn below for Applicants' convenience. .



5. Objection remains made to claims 63 and 64 as containing non-elected subject matter. Claims 63 and 64 both contain below formula (XIV) reference to non-elected purine and pyrimidine bases. The Examiner suggests in line 9, claim 63 and 64 deleting "purine or" and deleting "base or" and deleting from line 10 "thereof".

#### ***Claim Objections***

6. Objection remains to claims 74 and 75 are objected to because of the following informalities: the second triazine in claim 74 has a missing hydrogen atom. The third triazine in claim 75 has a missing hydrogen atom. Appropriate correction is required. .

***Claim Rejections - 35 USC § 112***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Claims 35, 37, 39-41, 45, 47, 48, 55, 57-59, 63, 65-69, 74, and 75 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 35, 45, 55, 63, 74, and 75 the words “thioaryl”, “thiol”, and “thioalkyl” occur. These are all indefinite. The term “thioalkyl” is indefinite for it is not clear if the bond from the thioalkyl group is from the sulfur or the alkyl. If the inventors intend the group HSR-, the Examiner suggests the word “mercaptoalkyl”. If they intend the group RS-, then the word “alkylthio” is appropriate. The term “thiol” is indefinite because it refers to a group of compounds not a monovalent radical. If the inventors intend the group HS-, Examiner suggests the word “mercapto”. Does “thioaryl” refer to a thiophene or to an aryl group with a sidechain sulfur? If the later, it is not clear if the bond from the thioaryl group is from the sulfur or the aryl. If the inventors intend the group HSC<sub>6</sub>H<sub>4</sub>-, the Examiner suggests the word “mercaptoarylene”. If they intend the group C<sub>6</sub>H<sub>5</sub>S-, then the word “arylthio” is appropriate.

To the extent that variables R<sub>7</sub> and R<sub>8</sub> are not used for the claimed triazine compounds, the Examiner suggests deleting these definitions.

8. Claims 56 and 60-62 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most

nearly connected, to make and/or use the invention. In claim 56, the protecting ester group  $R_y$  has changed to  $R_7$  in formula (XVII). On page 18, Scheme 2 Applicants have pictured formula (XVII) with the ester group  $R_y$  not  $R_7$ .  $R_7$  can be cyano halogen etc. How did this transformation occur?

9. Claims 56 and 60-62 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As explained above, Applicants have a different formula (XVII) pictured on page 18 from that pictured in the claims.

Applicants corrected the structure of formula (XVI) but formula (XVII) remains transmogrified.

***Allowable Subject Matter***

10. Objection is made to claims 36, 38, 42-44, 46, 49, 50, 64, and 70-72 because they still contain non-elected subject matter. The claims would be allowable if rewritten to overcome the objections made above in points #4 and #5. Claims 35, 37, 39-41, 45, 47, 48, 55, 57-59, 63, 65-69, 74, and 75 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date

of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Please direct any inquiry concerning this communication or earlier communications from the Examiner to Thomas C McKenzie, Ph. D. whose telephone number is (703) 308-9806. The FAX number for after final amendments is (703) 872-9307. The Examiner is available from 8:30 to 5:30, Monday through Friday. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mukund Shah can be reached on (703) 308-4716. Please direct general inquiries or any inquiry relating to the status of this application to the receptionist whose telephone number is (703) 308-1235.

*Mukund J. Shah*

**Mukund Shah**  
**Supervisory Patent Examiner**  
**Art Unit 1624**

TCMcK  
April 17, 2003

